

DEVELOPMENT OF THE AUCKLAND COUNCIL STORMWATER CODE OF PRACTICE

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ABSTRACT

Auckland Council, with assistance from SKM, has combined the stormwater codes of practice from the seven legacy councils into a single practical document that can be utilised region wide to provide guidance on design and installation of new stormwater facilities. This has been achieved through running a series of workshops with a technical advisory group of experienced practitioners selected from within Council, followed by an intensive internal consultation process involving the Auckland Council Stormwater Unit, Auckland Council Regulatory Team, Watercare Services, Auckland Transport and Auckland Council Parks and Recreation Services. This paper presents the advantages of this process and lessons learnt around developing the single Code of Practice. It also provides further detail on key issues within the document, and how they were addressed in the context of a developing planning framework.

KEYWORDS

Code of Practice, Standard, Consolidation, Consensus

PRESENTER PROFILE

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1 INTRODUCTION

In November 2010, Auckland Council was formed from eight regional, urban and rural councils governing the Auckland Region. These were Auckland Regional Council, plus the City or District Councils of Franklin District, Papakura District, Manukau City, Waitakere City, Auckland City, North Shore City and Rodney District. The aim of the amalgamation was to bring consistency and cost effectiveness to the ratepayers of Auckland.

Council staff, including engineering staff, were sourced from the existing councils, and brought a variety of capabilities and a variety of methodologies to manage Auckland Council's engineering and development risks.

At the time of amalgamation, each of the City and District Councils had design guidance on several of the following:

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- Rooding
- Stormwater
- Wastewater and water supply for those outside Watercare's boundaries
- Geotechnical elements
- General advice on rural development.

As a result, there were over 50 design guides in operation across the regions at the time of amalgamation. In addition, the Regional Council published best practice guidance on specific issues, including stormwater guidance in documents such as:

- TP108 – Guidance for stormwater runoff modelling in the Auckland Region
- TP90 – Erosion and sediment control guidelines for land disturbing activities in the Auckland Region
- TP10 – Design guideline manual for stormwater treatment devices
- TP124 – Low Impact Design Manual for the Auckland Region

The new Auckland Council and its Council-controlled Organisations (CCOs) of Auckland Transport and Watercare have each set about developing a single design Code of Practice. To ensure consistency in approaches, and to ensure standardisation across New Zealand, it was agreed that NZS4404:2010 – Land Development and Subdivision and Infrastructure would be used by Council and its CCOs as a standard basis for establishing design standards.

NZS4404 defines eight chapters of a development code for land use and subdivision:

- Chapter 1 defines requirements for design and construction, including the approval of design and construction. It could include urban design protocols, which for Auckland have been developed in the Auckland Design Manual.
- Chapter 2 defines earthworks, including design and dust and sediment control
- Chapter 3 defines roads, and is the Auckland Transport Code of Practice (ATCOP)
- Chapter 4 defines stormwater design
- Chapters 5 and 6 define wastewater and water supply design and have been developed by Watercare
- Chapter 7 defines landscape and environmentally responsive design, and for Auckland is likely to be integrated with the Auckland Design Manual
- Chapter 8 defines network utilities, and is not used by Auckland Council

The Stormwater Department of I&ES (Stormwater) was tasked with developing a stormwater Code of Practice, to be included as Chapter 4 of the overall guidance for Auckland. The aim of the document is to standardise approaches to stormwater design across Auckland.

2 METHODOLOGY TO RESOLVE THE PROBLEM

2.1 PHASE 1 – DEFINING THE SCOPE OF WORK

Auckland Council's first task was to assess the extent of guidance currently available from each of the legacy councils. In total, there were over 150 discrete passages of text to compare and consider, and more than 130 drawings. This analysis was done in-house.

It was found that several of the legacy councils actually required different standards, such as size of storm to be conveyed in pipes, and that different Councils had mandated the design guidance in different ways, including by bylaw and by writing design requirements within the District Plan.

In addition, each council had its own set of drawings, in different formats, in varying levels of detail, and sometimes with different details. A single layout and a standard set of drawings were required.

A methodology was required to determine the most suitable approach, and to seek consensus on that approach. The consensus was likely to be technical consensus from within the stormwater department, followed by 'policy' consensus on financial, legal and risk implications. The process of resolution was therefore likely to be complicated. It is important to note that the design Code of Practice was intended to be applied to future development, not retrospectively.

As part of the review, six key issues were identified that needed to be resolved in order to develop a single Code of Practice for Auckland.

2.1.1 SIX KEY ISSUES

The six key issues identified were:

- Developing a design standard for return period to be conveyed by pipe
- Developing a design standard for freeboard
- Defining the boundary between public and private drains, and rules to delineate this boundary
- Defining a minimum pipe size for stormwater pipes
- Developing an approach regarding public or private ownership of watercourses
- Developing an approach regarding ownership of water treatment devices

In some cases, a solution was put forward at this stage, and consensus sought, but no technical consensus could be reached within the stormwater department. It was therefore proposed to engage a consultant to advise on the technical issues.

2.2 PHASE 2 – DEVELOPING AN IMMEDIATE SOLUTION

Council's immediate problem was to develop something that was workable, across the seven legacy council areas. Stormwater resolved that a two stage approach should be taken. Initially, a code of practice should be developed, consistent with NZS4404, that utilised the existing codes, identifying for each clause which former council approach would be most suitable. This would give Council something workable, based on existing council practice in one or more areas of Auckland. However, for the longer term, a more

detailed and improved design standard would be developed, to fully reflect the new Council's requirements.

Engaging Council expertise from across the stormwater business was key to establishing a short term code of practice that reflected existing Council approaches and was most suitable for the region. Therefore two types of management teams were convened for the project, to reflect the depth of technical expertise and the breadth of managerial and policy approaches.

2.2.1 MANAGEMENT STRATEGY

At the time of commissioning the work, Council was still developing project management best practice. General Council strategy for any significant projects was to appoint a Project Control Group – a steering group comprising senior managers from the stormwater unit. The steering group for this project was made up:

- Head of project delivery (stormwater CAPEX design and build)
- Head of Technical Guidance and Development Engineering
- Staff member responsible for development engineering who was also Project Sponsor
- Project Manager

A Technical Advisory Group (TAG) was also established. The Code had to be accepted by several parties:

- Stormwater's specialists in development engineering, who represented the end asset owner of any public assets
- Stormwater's operational staff who would inherit the operation and maintenance of any public assets
- Council's development engineers, who worked to assess developer applications for engineering approval and building control

The TAG members were nominated to represent these and other departments of Stormwater such as planning and project delivery, and to represent a variety of legacy councils in terms of experience of previous codes of practice.

2.2.2 PROCUREMENT STRATEGY

As noted above, a consultant was to be appointed to:

- Advise on resolution of key issues
- Work with the TAG to develop a single code
- Work with Council to develop a standard way of presenting drawings and a standard set of drawings to implement the code

The scale of work necessary to gain consensus and to develop a single code and drawings was not well understood within Council. In addition, Council wished to seek innovation from the industry on methods of developing a short term solution. The scale of costs was such that Council's procurement strategy required that an open tender was undertaken, and this enabled Council to seek innovations from the whole consultant market.

Because of the level of uncertainty, the work was defined into a number of lump sum items, with an additional competitive rate for workshops and for extra-over hourly rates

as part of the tender process. A workshop for presenting to the industry was required as part of the brief.

2.2.3 TENDER PROCESS

Tenders were called for services to assist the Council in developing a Stormwater Code of Practice in November 2011. After an initial review based on price and non-price attributes, preferred consultants were invited to give a presentation on their proposed methodology.

SKM was appointed at the end of December 2011, with work programmed to be completed in June/July 2012. As part of their proposal, SKM proposed a series of workshops rather than only two as allowed in the tender, to achieve in-house consensus. They also proposed to utilise the Council's drafting capability to minimise programme extent.

2.3 PHASE 3 – DEVELOPING THE 'PERFECT' SOLUTION

It was recognised that the use of existing design standards would be unlikely to fully meet the requirements of the new single Auckland Council. It was also recognised that planning and development in Auckland would be in a state of flux until the new Unitary Plan was developed, and that other guidance such as Technical Publications (now called Guidance Documents) was being prepared which could alter some approaches. It was therefore assumed that the design code proposed above would serve as an interim measure, whilst time was invested in developing better guidance.

A key component of the project was to identify gaps in current guidance, so that work could commence on developing new guidance. In addition, policy issues were to be flagged, to be addressed either within the Unitary Plan text when issued, or elsewhere.

3 KEY ISSUES AND HOW THEY WERE ADDRESSED

3.1 GENERAL PRINCIPLES

As noted above, a key requirement of the project to develop the new Auckland Council Stormwater Code of Practice (CoP) was to resolve six key, outstanding issues that were identified in an earlier phase of the project.

The following approach was used to investigate and develop a consensus approach across Council guidance. This same approach was used to resolve the key issues:

- The overall principle in developing the new CoP document was to consolidate existing legacy standards, seeking consistency with the NZ Standard (NZS4404) wherever possible. A review of the legacy councils' existing CoPs, NZ Standards, Watercare standards and the NZ Building Code was completed.
- A spreadsheet was developed which compared, clause-by-clause, guidance from across the legacy councils. Where more than one approach existed, the variety of approaches and a recommendation on the preferred Council approach was presented to the Council Technical Advisory Group (TAG) over a series of workshops and discussed with the group in detail.
- If consensus could not be gained during the workshops the issue was taken away and consulted on with additional people from Council and other parties if necessary.

- The issue was then re-presented to the TAG via email or in a following workshop with discussion and an agreement eventually made within the group.

This process was followed for clauses and for drawings. Seven workshops were programmed, and the first six dealt each with a certain subsection of the NZS4404 text and drawings, plus a focus on one of the key issues. Each of the key issues was also addressed using the approach above.

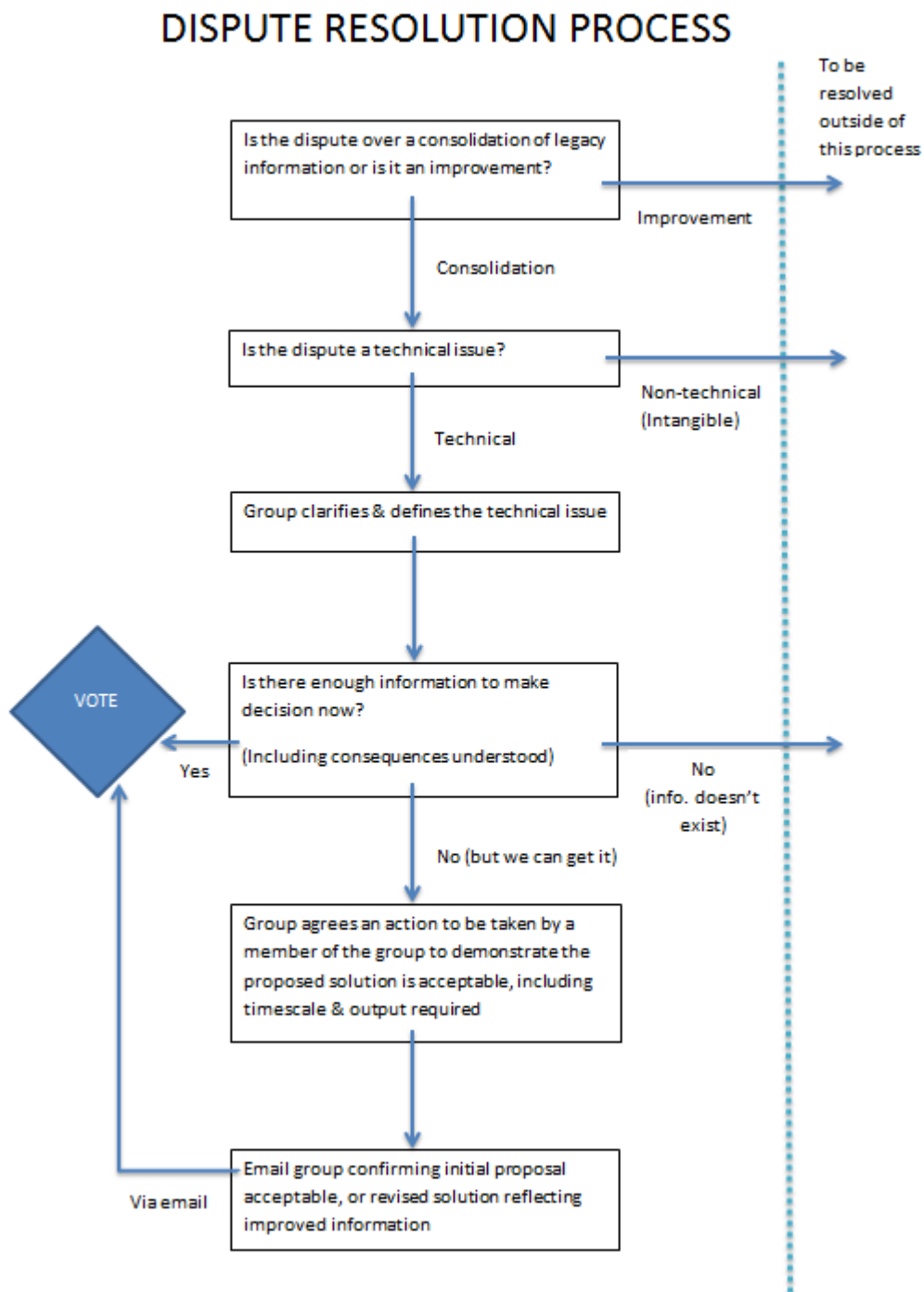
The workshop process was used to define and agree the process for consensus described above. If a stalemate was reached on an issue, the group would determine:

1. Whether the issue should actually form part of the consolidated code or whether it was outside the scope
2. Whether an immediate answer was likely to exist, or whether the issue would require a level of work such that it was more likely to be resolved in Version 2 of the code
3. Who would lead the resolution of the query from within the TAG
4. Whether the TAG would reconvene to discuss, or accept an e-mail response

The following figure shows the dispute resolution process. In addition, an ongoing register of actions was kept and tabled at each workshop. A record was kept at each meeting of the following:

- Each consensus decision made
- Issues which had been identified to be included in Version 2 of the code
- Issues related to policy which were to be taken back and addressed elsewhere in Council

Figure 1: Flowchart for resolution of issues where consensus could not be reached



These principles were very successful in facilitating group consensus. The remainder of this section demonstrates how resolution of the six key issues progressed from initial work prior to commencement of the project to a proposed technical resolution to be taken back to Council for consideration, using these principles.

3.2 RETURN PERIOD DESIGN STANDARD

3.2.1 SUMMARY OF PREVIOUS WORK

A variety of return periods were used by the legacy councils which Auckland Council wished to standardise. These return periods ranged between 20% annual exceedance probability (AEP) and 10% AEP for residential systems and 10% AEP and 5% AEP for commercial areas for the primary system. Most councils were consistent in that the secondary system should be sized to cater for 1% AEP storm for the secondary system with one council being the exception with a 2% AEP standard.

3.2.2 DEVELOPMENT OF ISSUE RESOLUTION

After the review of all current codes, the team noted that Auckland City Council (ACC) had a specific design standard for two designated business zones. An initial recommendation was made to the TAG to adopt the NZS4404 approach of a 10 year ARI storm event for the primary system and the 100 year ARI event for the secondary system, with the additional requirement that the primary system for the Business Zones will have a 20 year ARI event capacity, as per existing ACC design standard requirements.

This was discussed and developed with the following consensus gained by the TAG:

- A 10 year ARI event primary system capacity for all urban areas (residential and commercial) was proposed by the TAG which is in alignment with New Zealand Standards (NZS4404) and the majority of existing legacy council approaches. It will mean an increase in return period design standard for two legacy regions but for the sake of a unified regional standard this was seen as being appropriate. This proposal has gone back to Council for further consideration.
- It was proposed that the higher criterion of 20 year ARI event capacity that ACC have for the two Business Zones will be kept, as a specific element of guidance from a previous council. It was noted that future Council planning may lower this, or may identify additional intensively developed areas which require a similar protection standard. This will therefore be reconsidered in the next version of the guidance.
- Overland flow path capacity was proposed to be uniformly required to provide capacity for the 100 year ARI event. This is in alignment with NZS4404 and all legacy councils except for one which stated a 2% AEP capacity (approximately the 50 year ARI event). Importantly, this will raise the overland flow path capacity requirements in this area for future development only, rather than applying the standard retrospectively. In attaining a uniform region-wide document, it was seen as being more appropriate to raise the standard of a relatively small portion of Auckland than lower the standard for the rest of the region to that below the standard recommended in NZS4404. This issue was discussed thoroughly in the workshop and a recommendation agreed with the TAG. This proposal has gone back to Council for further consideration.

3.3 FREEBOARD

3.3.1 SUMMARY OF PREVIOUS WORK

Prior to the commencement of the project it was suggested that the standard presented in NZS4404: 2010 should be utilised for the Auckland Council CoP. This standard is that the minimum freeboard height additional to the computed top water flood level of the 1% AEP design storm shall be 0.5 m for habitable dwellings and attached garages, 0.3 m for commercial and industrial buildings and 0.2 m for non-habitable residential buildings and detached garages.

It was also determined that assessment of freeboard levels was a separate topic to that of coastal freeboard and that the CoP should not attempt to establish specific freeboard levels related to tides in coastal areas. Thus climate matters in relation to future tide levels, storm surge and tsunami were not required to be resolved under this project.

3.3.2 DEVELOPMENT OF ISSUE RESOLUTION

The project team reviewed the legacy documents, which demonstrated that a wide range of freeboard requirements were applied under a variety of different circumstances. In particular some catchments had freeboards ranging from 1000 mm to 1500 mm. Although there was no data available as to why, it was surmised that there was a potential lack of confidence in the existing hydraulic data. This information was discussed with the TAG and a consensus agreement reached that a universal freeboard standard would be preferred to be applied over the Auckland region. The standard used by NZS4404 was discussed and it was generally agreed that using the freeboard limits prescribed in that document would be acceptable and would also bring the Auckland requirements into line with the rest of the country. It was agreed that the limits within NZS4404 that apply to habitable, commercial and non-habitable floor levels should be adopted for this code of practice in order to align with NZS4404.

The TAG noted that issues remained around confidence of models and other hydraulic data, in particular where the legacy documents had prescribed greater freeboards for specific catchments. The TAG requested that this matter was investigated further with Stormwater Planning before final agreement was confirmed. As the Council is implementing a programme of updating existing models, it is considered unreasonable to state a freeboard limit based on concerns around unreliability of specific models. However the modelling team within Stormwater Planning are able to advise the development engineers of any catchments where there are current concerns over model accuracy.

3.4 DEFINITION AND EXTENT OF PUBLIC AND PRIVATE DRAINS

3.4.1 SUMMARY OF PREVIOUS WORK

It was identified at the outset of the project that the legacy councils had a range of different approaches to the definition of public and private drainage. It was desired that responsibilities for Council and private owners for drainage should be defined more clearly within the CoP. Previous work had identified the following means of defining the public / private boundary, which were used in different councils:

- Definition included in a Bylaw
- Customer charters used to define ownership of drains
- Definition was included in the infrastructure design standards

3.4.2 DEVELOPMENT OF ISSUE RESOLUTION

The project team's approach was to initially conduct a review of existing requirements within the legacy documents, which demonstrated that there was no clear or consistent definition of the boundary between privately owned assets and public assets. As stated above there was a mixed approach by all of the legacy councils and therefore a consistent solution was required that was acceptable to the Stormwater group and practical and easy to implement.

Watercare's approach to public versus private ownership for wastewater was also reviewed, and it was noted that Watercare had adopted a system of creating a "point of supply": the point where the sewer from a property becomes public. In general the point of supply is at the boundary between private and public land unless:

- 1) The main sewer runs through the private property in which case the point of supply is at the main sewer, or
- 2) Where two properties share a sewer the point of connection is where the two private pipelines connect

It is important to note that under Watercare's approach a property owner may have part of their sewer within their neighbour's property therefore requiring an easement for that sewer.

Discussions across the TAG about operational access and landowner difficulties suggested that a solution was required that would put the ownership of the pipe with Council up to the boundary of the private property it serves. This notion was detailed and discussed extensively, and a set of draft rules and a draft drawing defining the approach was developed. This was presented at the TAG's sixth workshop and refined during the seventh workshop, where consensus agreement was reached on the text and the drawing.

During the consultation phase this issue was heavily reviewed and a number of changes were proposed. It should be noted that during the development of this issue it became apparent that three separate pipeline types needed to be defined on the basis of what their purpose was and the number of properties they served. The conditions under which smaller diameter pipes (100 – 200 mm) would be allowed within the public network needed to be set out specifically. This is discussed further in 3.5 below.

A technical case has been made that the standard approach across the new Council should be that any new private pipelines shall be contained within the boundary of the lot they serve. Where a lot's connection has to cross the boundary the pipeline from that point shall be deemed public.

A significant amount of detail has been developed on how to apply this approach and explanatory drawings have been developed. This proposal now has to go back to Council

to consider cost advantages and disadvantages of such an approach before a decision is made.

The authors will provide an update in their presentation.

3.5 MINIMUM PIPE SIZE FOR NEW PUBLIC STORMWATER DRAINS

3.5.1 SUMMARY OF PREVIOUS WORK

Prior to the commencement of this project it was considered that a minimum diameter of 225 mm should be required for all pipelines including catchpit leads.

3.5.2 DEVELOPMENT OF ISSUE RESOLUTION

The project team initially conducted a review of existing requirements within the legacy council documents. This demonstrated that there was a range between 100 mm and 225 mm as a minimum diameter with NZS4404 stating that the minimum should be 200 mm for house leads and 300 mm for all other mains and double sump leads. This was presented to the TAG and an early consensus was reached that the minimum diameter should be 225 mm for all public mains and catchpit leads.

This was further developed within the workshop sessions on two occasions:

1. For high capacity catchpits it was deemed that a higher standard of catchpit lead should be specified to take into account the increased flow expected. Therefore a 300 mm diameter pipeline was specified for both the "Max Pit" and the "Splay" catchpits, and a note included on the "Mega Pit" drawing to state that the outlet pipe shall be specifically designed.

2. During the discussion around public versus private pipelines it was determined that that by simply having one minimum pipe size (at 225 mm diameter) it was not practical to provide connections to the public system in a desirable manner, i.e. a 225 mm diameter pipe cannot be saddled to another 225 mm diameter pipeline. It became apparent that three separate pipeline definitions were required. These were developed based on principles agreed in the workshop.

3.6 OWNERSHIP OF NATURAL WATERCOURSES

3.6.1 SUMMARY OF PREVIOUS WORK

It was recognised that a clear recommendation was required on ownership of natural watercourses; almost all are in private ownership but there are a few that are owned by Council. Clarity was desired regarding the responsibilities for Council and private owners should something go wrong.

3.6.2 DEVELOPMENT OF ISSUE RESOLUTION

There was a clear view amongst the TAG that Council should not take on more ownership or vested control and maintenance of Auckland's watercourses than that which currently exists. Access issues and maintenance costs were the most important factors influencing this decision.

The project team was aware that there may be a contradiction between the approach proposed for watercourses and the approach proposed for ownership of treatment devices and stormwater pipe assets, as watercourses that may receive public stormwater will still remain in private ownership under the new CoP. However the associated costs seem to far outweigh gains from a completely consistent approach to the ownership of stormwater infrastructure.

It was also acknowledged by the project team that the issue of watercourse ownership extends beyond the control of the Auckland Council Stormwater Development Team and this technical recommendation will be taken back to the wider Council organisation to make further decisions on the matter.

During the internal consultation phase, sections on watercourse rehabilitation and daylighting were proposed and later adopted by the TAG during the final two workshops. Clauses were added to identify options for watercourse rehabilitation.

3.7 OWNERSHIP OF STORMWATER MANAGEMENT DEVICES

3.7.1 SUMMARY OF PREVIOUS WORK

Prior to commencing the project it was understood that a clear recommendation was required on the ownership of stormwater management devices. Additionally, clarity was required around Council and private owner's responsibilities should something go wrong.

3.7.2 DEVELOPMENT OF ISSUE RESOLUTION

The review of existing legacy documents showed there was no consistent or clear definition of device ownership amongst the legacy councils. A well-defined and practical position on device ownership rule was needed to be developed by the team.

In early discussions held with Auckland Council's Stormwater Technical Services team, it was agreed that selection and performance of these devices was to be defined by the current TP10 document and proposed new technical guidance documents (GDs) once released. Under this premise, the issue of device ownership was presented to the TAG at a workshop. A consensus was reached that if there was public stormwater flow entering the device then it should be publicly owned; otherwise the device shall be deemed private. This implies that if the incoming pipe to the device is public then the device will be publicly owned.

During the internal consultation phase further detail was added to this section by the development engineers. In particular this included clarifying the requirements of vesting a device into Council ownership.

4 INTERFACE BETWEEN OTHER COUNCIL DEPARTMENTS

It was recognised at the outset of this project that the Stormwater CoP will impact upon a number of different Council departments. The impact may be direct, for example with development engineers who will have to enact what is in the CoP, or indirect as with Auckland Transport, whose road drainage section of their document will need to coordinate with the stormwater section. Having a method to ensure that the wider Council had the opportunity to input to the CoP was therefore highly important.

4.1 INTERFACE DURING INITIAL DRAFTING

During the development of the first draft of the CoP it was important that the TAG was allowed to focus on reaching a consensus decision without being too greatly influenced by wider external parties. The view was taken at the outset that the TAG should be allowed to develop the Code of Practice into at least a workable technical draft before it was influenced by other external sources. This approach was necessary in order to ensure that it was possible to reach a decision and to deliver a document that represented the TAG's views, but which also formed something that could be discussed with external sources and reviewed by them at a later time.

Throughout this process the TAG recognised that there were areas that were either beyond their own expertise or where consulting other people or groups of people within the wider Council would benefit the development of the CoP. At times during the workshop discussions it became apparent that a specific issue required specialist technical advice from elsewhere in Council.

In addition, where it was recognised that there would be significant cross over between the Stormwater CoP and an equivalent standard being developed by another department within Council, early meetings were established to coordinate some of the outcomes and to attempt to provide consistency across the documents. A meeting was held with Auckland Transport to discuss the interface between stormwater and roading drainage and member of the TAG attended a Watercare workshop to discuss their approach to the further development of their CoP.

4.2 INTERFACE FOLLOWING COMPLETION OF THE FIRST DRAFT

Following the completion of the first draft of the CoP, internal consultation with the relevant Council departments (Regulatory, Parks Sports and Recreation, Watercare, Auckland Transport, and Regulatory) was undertaken as discussed in section 2 above. This took the form of a series of facilitated workshops where the draft CoP was presented to members of the relevant Council department and their feedback captured, initially by notes taken during the workshop, and then subsequently by written responses from these individuals in a period following the workshops. Additionally the draft CoP was circulated around members of the Stormwater Unit for their feedback.

All of the feedback received (over 400 separate comments) was collated into a spreadsheet. This feedback was then filtered into the following categories:

- General comments requiring no action
- Feedback that could be actioned immediately under the premise of consolidation of the legacy documents
- Feedback which would require significant divergence from the legacy documents to action, but were important suggestions for future improvement. This information was transferred to the project's "Future Actions List" discussed in section 2.

The feedback from the second category was then attributed to the relevant section from the draft CoP and evaluated on the basis of what would be the best way to incorporate this feedback into the actual text. The text was then updated with the feedback comments and reviewed by the TAG group at the final two workshops to gain their acceptance of the suggested changes. Where the TAG group agreed that a suggested

change was not appropriate then either the changed text was modified to a statement that the TAG agreed with, or it was removed and a comment recorded in the feedback spread sheet to state this.

5 RELEASE OF COP FOR WIDER CONSULTATION

The main aim of this first Code of Practice is to consolidate existing guidance and make it available quickly. At the time of writing this paper the document is going through a final review with the Project Control Group before being presented to the Infrastructure and Environmental Services Management Team for discussion and sign off. This process will include assessment of wider financial and other implications, and there is potential for some of the recommendations not being accepted, or being deferred until a later iteration of the Code so that more data can be sought.

Under the current regulatory framework some of the legacy District Plans and Bylaws make specific reference to the standards and codes of practice for the individual legacy councils. It was understood by the project team that these references would be likely to complicate the introduction and enforcement of the new Code of Practice. Therefore, consideration is also needed as to how the new code will be mandated.

Once the document is in a final form, it needs to be issued to the industry for feedback. As it is a consolidation, it should not contain any significant changes to practice from what is currently in use for one or more of the seven legacy councils. However the timing and extent of consultation must be weighed up with legal requirements from legacy planning documents and bylaws, and with the current implications of the Unitary Plan.

5.1 LEGAL CONSIDERATIONS

A workshop was held between Stormwater and the development engineers who will implement and enforce the Code, to discuss how the Code and the overall Engineering Approval Process work together. It was noted that the Code of Practice is given effect through the Engineering Approval Process, and is not mandated under the RMA.

Although some of the legacy councils included references to their design code within their Plans, this was perceived to lead to delays in implementation time. In addition, for the launch of our new Unitary Plan it would get caught in a significantly wider consultation process. It was agreed that the design code will therefore not form part of the Unitary Plan document.

At time of writing, the Draft Unitary Plan goes to consultation on 18 March 2013, and is expected to be published in late 2013. However, once it is in the public domain, current District Plan provisions could be considered to be superseded by the Unitary Plan. In addition, all of the historic bylaws have now lapsed so a new Stormwater Bylaw is being prepared which will mandate the Code of Practice.

5.2 STRATEGY TO RELEASE COP

As noted above, the AT and Watercare design code of practice chapters have already been drafted. The Watercare code is in use, and the ATCOP is in consultation at time of writing. The remaining chapters will not be ready for a coordinated release in a similar timeframe to the Stormwater CoP. It was therefore agreed that the preferable method to release the COP was by itself, prior to a coordinated release.

Consideration was given to how to release and implement the code, with the following options:

6 month industry consultation followed by final issue

The document would be rolled out in a series of industry workshops and feedback sought. This approach gives industry the chance to adapt to / prepare for any changes, before they take effect. However there will be no legal obligation for developers to use the SWCOP during the consultation period. As the legacy guidance remains available, developers are likely to choose the less onerous guideline as a basis for their designs, meaning that the lack of consistent approaches across Auckland will continue for the next 6 months.

Issue now, with reissue either after 6 months feedback, or as Version 2 of the document

The document would be rolled out as the new code, applicable immediately, or at a set cut-off date. Feedback would be sought from practitioners actually implementing the new code. This runs the risk that any significant problems or flaws with the code, including increased development costs, will not be identified by the industry prior to formalisation. It does however have the advantage of being a single document once the legacy documents are superseded by the issue of the Unitary Plan.

As such, it was considered that if historic guidance is no longer mandated, Development Engineering is likely to start requiring the new code to be observed. The issue will go to the Project Control Group for resolution.

At the time of writing (March 2013) the release of the document is anticipated by the end of May 2013.

6 CONCLUSIONS

Combining the sum knowledge of stormwater design requirements across Auckland's seven legacy councils has been a substantial task, requiring significant attention to detail. However, the legacy guidance was relatively similar in intent both around basic design principles and around appropriate levels of service. This has made the process achievable.

Having a Technical Advisory Group has been invaluable, in terms of having direct access to practitioners across Council who have implemented legacy codes and are familiar with their intent and their interpretation by Council and developers.

A series of facilitated workshops has proven to be a good methodology for reaching consensus on issues, and for discussing the code with key consultees. Establishing a methodology to deal with lack of consensus was a useful starting point for the process, as was the ongoing check of whether the issue raised was within scope.

Technical solutions have been proposed for each of the key issues. It is recognised that these have been identified as key issues because they have wide ranging implications, so the fact that a technical solution has been identified and agreed on does not mean that it will be fully implemented by Council.

The following key points are recommended to be included in the Stormwater Code of Practice:

1. The design return period should be standardised across Auckland for the primary system, and the secondary systems . An allowance has been made to have a higher design standard in high value business areas if required.
2. The freeboard levels above the 100 year ARI storm event shall be standardised across Auckland. The values proposed are approximately in line with NZS4404:2010
3. A minimum pipe diameter has been proposed for public mains with the provision for smaller diameters to be used for public branch lines and connections
4. Watercourse maintenance is proposed remain the responsibility of the owner of the land through which the watercourse passes
5. Stormwater treatment devices will be vested in Council ownership where certain criteria are met.

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Greg Hall – Development Engineering West

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