

# How OneSteel Reinforcing can help you obtain the new Green Star® Credit Points



- The Green Star® Rating System, which is tailored for various building types, is a checklist of items that enable architects, designers, specifiers and builders to obtain Green Star® steel credit points on construction projects.
- The new Green Star® steel credit (released 29th April 2010) aims to encourage best practice steel production and fabrication and dematerialisation of steel in structural applications in Australia.
- OneSteel Reinforcing can supply customers with the necessary documentation to enable a grant of up to two (2) points under the revised Green Star® steel credit.
- For these points to be awarded, your steel supplier must have a valid Environmental Management System in place, must be a member of the World Steel Association's Climate Action Programme, and minimum strength grade of reinforcing steel must be used. OneSteel Reinforcing complies with these pre-requisites.
- 1 point - at least 60% of the steel is made using an energy reduction process.
- 1 point - at least 15% of the reinforcing steel is used for off site optimal fabrication techniques.

**There are no longer 2 points granted for recycled content of reinforcing steel.**

Build with OneSteel Reinforcing





## OneSteel Reinforcing can meet the new Green Star® steel credit requirements

- OneSteel has a valid 14001 Environmental Management System in place.
- OneSteel is a member of the World Steel Association's Climate Action Programme.
- At least 60% of OneSteel Reinforcing steel is produced using Polymer Injection Technology – an energy reducing process in manufacturing.
- At least 95% of all OneSteel Reinforcing rebar and reomesh meets or exceeds 500 MPa strength grade.
- At least 15% by mass of all OneSteel Reinforcing rebar and reomesh can be produced using off site optimal fabrication techniques for agreed projects.

## Green Building Council documentation requirements

- Documentation to demonstrate compliance with optimal fabrication techniques is required from the steel fabricator/reinforcement processor in the form of a short report on where optimal steel manufacturing techniques are claimed, the optimal off site fabrication techniques (See GBCA Table 2 opposite) used in the building, and the quantities (by mass) of steel used in each optimal off site fabrication technique.
- **OneSteel Reinforcing can confirm pre-project by letter that it can meet the requirements, and will also complete the post-project GBCA Criteria 3 & 4 charts required for the project.**
- **Talk to OneSteel Reinforcing EARLY in the project so we can provide a quotation for the products and services to achieve these points.**



## Off site optimal fabrication techniques\*

- Off site optimal fabrication of reinforcing steel used in the building structure includes any combination of the design-driven fabrication techniques in the table below which optimise laps in mesh and spacing between bars, thereby reducing material and wastage associated with reinforcing steel fabrication and use.

Optimisation Technique	Description
Engineered Reinforcing Bar Carpet	Reinforcing bars fabricated off site for rolling out on site
Engineered/ Customised Mesh	Run-to-length meshes, tailored meshes, high ductility meshes, special size meshes, engineered meshes, variable diameter and spacing meshes
Prefabricated Reinforcing Cages	Prefabricated reinforcing cages for concrete elements such as slabs, walls, cores, columns and piles

**GBCA Table 2** - Off Site Optimal Fabrication Techniques for Reinforcing Steels

- Off site cutting and bending of bars to be hand-laid on site is not considered an optimal fabrication technique for the purpose of this credit
- Post-tensioning tendons are not counted in the reinforcing steel quantities.

\*Source: GBCA Revised Green Star® Credit 24.08.10





## OneSteel Reinforcing's Off site optimal fabrication techniques



### Engineered Reinforcing Bar Carpet:

OneSteel Reinforcing's 500PLUS® BAMTEC® Engineered Reinforcing Bar Carpet incorporates reinforcing bars fabricated off site for rolling out on site. Variable diameters and spacings can be quoted to optimise the steel content and ensure less material.



### Engineered/Customised Mesh:

OneSteel Reinforcing's ONEMESH® range of products include run-to-length meshes, tailored meshes, high ductility meshes, special size meshes, engineered meshes, variable diameter and spacing meshes.



### Prefabricated Reinforcing Cages:

OneSteel Reinforcing 500PLUS® PREFAB - Prefabricated reinforcing cages and welded elements can be quoted for concrete elements such as slabs, walls, core walls, beams, columns, piles and other construction elements.

**IMPORTANT INFORMATION** This publication has been prepared by OneSteel Reinforcing Pty Limited ABN 22 004 148 289. Please note that this publication is based on OneSteel Reinforcing's interpretation of the Green Star Rating Tools (Rating Tools) developed by the Green Building Council of Australia (GBCA). Whilst OneSteel Reinforcing provides this information in good faith, OneSteel Reinforcing does not warrant or represent that its interpretation of the Rating Tools is accurate, or will be the same as, or is indicative of the outcome of any assessment carried out by the GBCA or by any other assessor. The information contained in this publication including Rating Tool criteria, specifications and technical data are subject to change without notice and to ensure accuracy, OneSteel Reinforcing recommends you seek your own professional advice in relation to the matters covered by this publication to satisfy yourself and not to rely on the information without first doing so. Unless required by law the company cannot accept any responsibility for any loss, damage or consequence resulting from the use of this publication. Photographs shown are representative only of typical applications. This publication is not an offer to trade and shall not form any part of the trading terms in any transaction. ©Copyright 2010. OneSteel Reinforcing Pty Limited ABN 22 004 148 289. Green Star® is a trade mark of the Green Building Council of Australia. Not all products available in all locations.

## What OneSteel Reinforcing can offer customers

- If the customer talks to us in the early stages of the project we can suggest ways of designing the reinforcing such as spacing and diameters to optimise material use.
- This will improve the sustainability credentials of the project allowing the awarding of a steel credit point as well as potentially reducing the costs of reinforcing steel in the project.
- OneSteel Reinforcing can encourage the practice of moving product off site into prefabrication which fulfils the initial intent to reduce waste on site, and provides the opportunity for dematerialisation.
- With the help of OneSteel Reinforcing, the awarding of Green Star® credit points is recognition that there has been progress towards adopting more sustainable practices.

### OneSteel Reinforcing have a wide range of products and services that can assist in meeting the above requirements:

- Case studies and videos detail examples of specific projects and customer testimonials where OneSteel Reinforcing has added value and assisted in saving time, cost and steel using our products and services on construction projects.
- Case studies are available at [www.reinforcing.com](http://www.reinforcing.com)
- Videos are available at [www.reinforcing.tv](http://www.reinforcing.tv)

Supporting information for specific OneSteel Reinforcing ECO-REO™ products is available at [www.reinforcing.com](http://www.reinforcing.com) in the 'Technical Resources' section.



# Our products that can help obtain the 2010 revised Green Star<sup>®</sup> credit points:



## BAMTEC<sup>®</sup> Rebar Carpets

- In concrete floor slabs for practicality of steel fixing or to utilise standard mesh products the distribution of steel is often more conservative than required.
- The use of BAMTEC<sup>®</sup>, an engineered Class N 500PLUS<sup>®</sup> reinforcing bar carpet, can allow the size and positioning of reinforcing steel to be optimised.
- Variable diameters and spacings can be incorporated in the BAMTEC<sup>®</sup> quotation.



## Customised REOMESH<sup>®</sup>

- Precast concrete panels, floor slabs and walling elements are built using standard sheets of reinforcing mesh supplemented with reinforcing bar at critical positions. This can result in duplication of reinforcing steel and scrap losses that result from excess lapping and trimming of mesh sheets.
- Engineered and tailored mesh solutions include;
  - Variable wire spacing and wire diameters
  - Optimised mesh size (length and width)
  - Class N mesh



## Prefabricated Reinforcement

- Beams and columns manufactured off site from loose processed bars and ligatures.
- This is a more efficient process that normally generates less waste and scrap on site.
- The use of factory manufactured beams and columns can minimise material waste.
- Welded elements such as pile cages can be supplied with engineered lifting points.



**Economical\*** The new UTEMESH<sup>®</sup> gives more cost efficient cover and economy in the number of sheets used on projects.

**Environmental\*** OneSteel's manufacturing of reinforcing steel utilises energy reducing polymer injection technology and recycled steel scrap content.

\*Supporting information for specific OneSteel Reinforcing ECO-REO<sup>™</sup> products is available at [www.reinforcing.com](http://www.reinforcing.com) in the 'Technical Resources' section.

To view full length videos on these products visit [www.reinforcing.tv](http://www.reinforcing.tv)  
For further details, case studies and customer interviews, register for updates at [www.reinforcing.com](http://www.reinforcing.com) or email: [500PLUS@reinforcing.com](mailto:500PLUS@reinforcing.com)

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